

What is claimed is:

1. A supporting device for non-averaged force in a pipeline comprising:

a frame, which is fixed to a supporting portion, and  
a fixing mechanism, which serves to fix a pipe body to the frame,

wherein the fixing mechanism is arranged in that a wedge body is provided that is capable of blocking movements of the pipe body in a pipe axial direction with respect to the frame upon being pressed against an outer surface of the pipe body through pressing force acting from the frame towards the pipe body.

2. The supporting device for non-averaged force in a pipeline as claimed in Claim 1, wherein  
a plurality of the wedge bodies are disposed at specified intervals in the pipe axial direction, while a posture of the wedge bodies is set in a condition such that directions of wedge actions of one pair of wedge bodies adjoining in the pipe axial direction are opposite with respect to each other in the pipe axial direction.

3. A supporting device for non-averaged force in a pipeline comprising:

a frame, which is fixed to a supporting portion, and  
a fixing mechanism, which serves to fix a pipe body to the frame,

wherein the fixing mechanism is arranged in that the frame is provided with an edge portion for receiving an outer surface of the pipe body from one side in a radial direction of the pipe body by pinching the pipe body, and in that a wedge body is provided that is capable of blocking movements of the pipe body in a pipe axial direction with respect to the frame upon being pressed against an outer surface of the pipe body from the other side in the radial direction of the pipe body through pressing force acting from the frame towards the pipe body is provided.

4. The supporting device for non-averaged force in a pipeline as claimed in Claim 3, wherein a plurality of the wedge bodies are disposed at specified intervals in the pipe axial direction, while a posture of the wedge bodies is set in a condition such that directions of wedge actions of one pair of wedge bodies adjoining in the pipe axial direction are opposite with respect to each other in the pipe axial direction.

5. A supporting device for non-averaged force in a pipeline comprising:

a frame, which is fixed to a supporting portion, and  
a fixing mechanism, which serves to fix a pipe body to the frame,

wherein the fixing mechanism is arranged in that male screw members are provided that are capable of blocking movements of the pipe body in a pipe axial direction with respect to the frame

by pressing an outer surface of the pipe body with their tip end portions in a condition in which they are screwed into female screw portions formed in the frame.

6. The supporting device for non-averaged force in a pipeline as claimed in Claim 5, wherein the tip end portions of the male screw members are indented.

7. A supporting device for non-averaged force in a pipeline comprising:

a frame, which is fixed to a supporting portion, and  
a fixing mechanism, which serves to fix a pipe body to the frame,

wherein the fixing mechanism is arranged in that the frame is provided with edge portions for receiving an outer surface of the pipe body from one side in a radial direction of the pipe body by pinching the pipe body, and in that male screw members are provided that are capable of blocking movements of the pipe body in a pipe axial direction with respect to the frame by pressing an outer surface of the pipe body at their tip end portions in a condition in which they are screwed into female screw portions formed in the frame.

8. The supporting device for non-averaged force in a pipeline as claimed in Claim 7, wherein the tip end portions of the male screw members are indented.

9. A supporting device for non-averaged force in a pipeline comprising:

a frame, which is fixed to a supporting portion, and  
 a fixing mechanism, which serves to fix a pipe body to  
 the frame,

wherein the fixing mechanism is arranged in that a movement  
 blocking body is provided that is capable of blocking movements  
 of the pipe body in a pipe axial direction by being pressed against  
 an outer surface of the pipe body through pressing force acting  
 from the frame towards the pipe body,

the movement blocking body being comprised with a pair  
 of edge portions that are pressed against the outer surface of  
 the pipe body in a condition in which they are located at a  
 specified interval in the pipe axial direction.

10. A supporting device for non-averaged force in a  
 pipeline comprising:

a frame, which is fixed to a supporting portion, and  
 a fixing mechanism, which serves to fix a pipe body to  
 the frame,

wherein the fixing mechanism is arranged in that the frame  
 is provided with a first receiving portion provided with an edge  
 portion for receiving an outer surface of the pipe body from  
 one side in a radial direction of the pipe body by pinching the  
 pipe body, and

in that a second receiving portion, which is provided with  
 an edge portion for receiving the outer surface of the pipe body  
 from the other side in the radial direction of the pipe body,

is provided to be freely coupled to and released from the coupling with respect to the first receiving portion.

11. The supporting device for non-averaged force in a pipeline as claimed in Claim 10, wherein the edge portion is set in a posture that is in line with a peripheral direction of the first receiving portion or the second receiving portion, and in that a plurality thereof is disposed at specified intervals in the peripheral direction and an axial core direction of the first receiving portion or the second receiving portion.

12. The supporting device for non-averaged force in a pipeline as claimed in Claim 10, wherein the edge portion is set in a posture that is in line with a peripheral direction of the first receiving portion or the second receiving portion, and in that a plurality thereof is disposed at specified intervals in an axial core direction of the first receiving portion or the second receiving portion.

13. The supporting device for non-averaged force in a pipeline as claimed in Claim 10, wherein the edge portion is set in a posture that is inclined with respect to an axial core direction of the first receiving portion or the second receiving portion, and in that a plurality thereof is disposed at specified intervals in the peripheral direction and the axial core direction of the first receiving portion or the second receiving portion.

14. The supporting device for non-averaged force in a

pipeline as claimed in Claim 10, wherein edge portions of a posture that is in line with the peripheral direction of the first receiving portion or the second receiving portion and edge portions of a posture that is inclined with respect to the axial core direction of the first receiving portion or the second receiving portion are mixed.

15. A supporting device for non-averaged force in a pipeline comprising:

a frame, which is fixed to a supporting portion, and  
a fixing mechanism, which serves to fix a pipe body to the frame,

wherein the fixing mechanism is arranged in that a movement blocking body is provided that is capable of blocking movements of the pipe body in a pipe axial direction by being pressed against an outer surface of the pipe body through pressing force acting from the frame towards the pipe body,

the movement blocking body being arranged in that three or more edge portions, which are pressed against the outer surface of the pipe body, are provided on a blocking main body portion in a condition in which they are located at specified intervals in the pipe axial direction, or alternatively, in that one edge portion, which is pressed against the outer surface of the pipe body, is provided on the blocking main body portion.

16. A supporting device for non-averaged force in a pipeline comprising:

a ring body, which encloses a pipe body,

a plurality of pressing portions, which press the pipe body from outside in a radial direction while being dispersed in a peripheral direction of the ring body,

a frame, which is provided as a separate body than the ring body and is fixed to a fixing portion, and

a supporting portion, which is provided at the frame for supporting the ring body.

17. The supporting device for non-averaged force in a pipeline as claimed in Claim 16, wherein the supporting portion is arranged in that a concave portion for receiving and accumulating a portion of the ring body portion or a portion of the belt body is provided at the frame.

18. The supporting device for non-averaged force in a pipeline as claimed in Claim 16, wherein the frame is arranged by mutually coupling a pair of separated frames made of an angle member disposed in a condition in which they are aligned in the pipe axial direction of the pipe body, and

that the supporting portion is arranged in that a first restricting portion for receiving and restricting the ring body in vertical directions, a second restricting portion for receiving and restricting the same from outside in lateral directions, and a third restricting portion for receiving and restricting the same in the axial core direction of the pipe body are provided at the respective separated frames.

19. A supporting device for non-averaged force in a pipeline comprising:

a belt body, which fastens a pipe body,  
a frame, which is provided as a separate body than the belt body and which is fixed to a fixing portion, and  
a supporting portion, which is provided at the frame for supporting the belt body.

20. The supporting device for non-averaged force in a pipeline as claimed in Claim 19, wherein the supporting portion is arranged in that a concave portion for receiving and accumulating a portion of the ring body portion or a portion of the belt body is provided at the frame.